

REQUEST FOR ACCESS TO AN APPLICATION UNDER 37 CFR 1.14(e)

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File Information Unit

in re Application of

Application Number

09/061,318ah

Filed

4/16/98

Art Unit

Examiner

Paper No.

27

Assistant Commissioner for Patents
Washington, DC 20231

1. ☐ I hereby request access under 37 CFR 1.14(e)(2) to the application file record of the above-identified ABANDONED Application, which is not within the file jacket of a pending Continued Prosecution Application (CPA) (37 CFR 1.53(d)) and is: (CHECK ONE)

☐ (A) referred to in:

United States Patent Application Publication No. _____, page _____, line _____,

United States Patent Number 6,497,768 column _____, line _____, or

an International Application which was filed on or after November 29, 2000 and which

designates the United States, WIPO Pub. No. _____, page _____, line _____.

☐ (B) referred to in an application that is open to public inspection as set forth in 37 CFR 1.11(b) or

1.14(e)(2)(i), i.e., Application No. _____, paper No. _____, page _____, line _____.

2. ☐ I hereby request access under 37 CFR 1.14(e)(1) to an application in which the applicant has filed an authorization to lay open the complete application to the public.

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US006497768B2

#27

(12) **United States Patent**
Bergman

(10) Patent No.: **US 6,497,768 B2**
(45) Date of Patent: ***Dec. 24, 2002**

(54) **PROCESS FOR TREATING A WORKPIECE WITH HYDROFLUORIC ACID AND OZONE**

FOREIGN PATENT DOCUMENTS

(75) Inventor: **Eric J. Bergman, Kalispell, MT (US)**

EP 0 344 764 12/1989

(73) Assignee: **Semitool, Inc., Kalispell, MT (US)**

EP 0 548 596 A2 6/1993

EP 0 702 399 3/1996

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

GB 2 287 827 9/1995

JP 52-12063 4/1977

OTHER PUBLICATIONS

This patent is subject to a terminal disclaimer.

Abstract of JP 3041729 published Feb. 22, 1991.

Abstract of JP 1008630, published Jan. 12, 1989.

(21) Appl. No.: **09/929,312**

Abstract of Japanese Appln. No. 63-16127 published Jul. 31, 1989.

(22) Filed: **Aug. 14, 2001**

(65) **Prior Publication Data**

Abstract of Japanese Appln. No. 52-100473 published Mar. 14, 1979.

US 2002/0050279 A1 May 2, 2002

Related U.S. Application Data

Abstract of Japanese Appln. No. 1-192712 published Mar. 12, 1992.

(63) Continuation of application No. 09/621,028, filed on Jul. 21, 2000, which is a continuation-in-part of application No. PCT/US99/08516, filed on Apr. 16, 1999, which is a continuation-in-part of application No. 09/061,318, filed on Apr. 16, 1998, now abandoned, which is a continuation-in-part of application No. 08/853,649, filed on May 9, 1997, now Pat. No. 6,240,933.

Translation/Abstract of Japanese Appln. No. 1984-125760 published Jan. 10, 1986.

(List continued on next page.)

(51) Int. Cl.⁷ **B08B 3/00; B08B 5/00; C23G 1/02**

Primary Examiner—Zeinab El-Arini

(52) U.S. Cl. **134/3; 134/2; 134/25.4; 134/30; 134/31; 134/33; 134/41; 134/902**

(74) Attorney, Agent, or Firm—Perkins Coie LLP

(58) Field of Search **134/2, 3, 25.4, 134/30, 31, 33, 41, 102.1, 102.2, 108, 111, 199, 902**

(57) **ABSTRACT**

A workpiece or substrate is placed in a support in a reaction chamber. A heated process liquid is sprayed onto the substrate. The thickness of the layer of process liquid formed on the substrate is controlled, e.g., by spinning the substrate. Ozone is introduced into the reaction chamber by injection into the liquid or into the reaction chamber, while the temperature of the substrate is controlled, to chemically process the substrate. The substrate is then rinsed and dried.

(56) **References Cited**

U.S. PATENT DOCUMENTS

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28 Claims, 7 Drawing Sheets

